



(Billing Code: 4150-31)

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Office of the Secretary

Findings of Research Misconduct

AGENCY: Office of the Secretary, HHS.

ACTION: Notice.

SUMMARY: Notice is hereby given that the Office of Research Integrity (ORI) has taken final action in the following case:

Makoto Suzuki, M.D., University of Texas Southwestern Medical Center: Based on the report of an investigation conducted by the University of Texas Southwestern Medical Center (UT Southwestern) and analysis conducted by ORI in its oversight review, ORI found that Dr. Makoto Suzuki, currently a Professor in the Department of Thoracic Surgery, Kumamoto University Hospital, Kumamoto, Japan, and formerly a Visiting Scientist in the Hamon Center for Therapeutic Oncology Research, UT Southwestern, engaged in research misconduct in research supported by National Cancer Institute (NCI), National Institutes of Health (NIH), grants P50 CA070907 and U01 CA084971.

ORI found that Respondent knowingly, intentionally, and recklessly falsified data reported in six (6) publications:

- Suzuki, M., Hao, C., Takahashi, T., Shigematsu, H., Shivapurkar, N., Sathyanarayana, U.G., Iizasa, T., Fujisawa, T., Hiroshima, K., & Gazdar, A.F. “Aberrant methylation of SPARC in human lung cancers.” *Br J Cancer* 92(5):942-8, 2005 Mar 14 (hereafter referred to as “*BJC* 2005-1”); Retraction in: *Br J Cancer* 108(3):744, 2013 Feb 19
- Suzuki, M., Shigematsu, H., Shames, D.S., Sunaga, N., Takahashi, T., Shivapurkar, N., Iizasa, T., Frankel, E.P., Minna, J.D., Fujisawa, T., & Gazdar, A.F. “DNA methylation associated inactivation of TGFbeta-related genes DRM/Gremlin, RUNX3, and HPP1 in human cancers.” *Br J Cancer* 93(9):1029-37, 2005 Oct 31 (hereafter referred to as “*BJC* 2005-2”); Retraction in: *Br J Cancer* 109(12):3132, 2013 Dec 10
- Suzuki, M., Shigematsu, H., Takahashi, T., Shivapurkar, N., Sathyanarayana, U.G., Iizasa, T., Fujisawa, T., & Gazdar, A.F. “Aberrant methylation of Reprimo in lung cancer.” *Lung Cancer* 47(3):309-14; 2005 Mar (hereafter referred to as “*LC* 2005”); Retraction in: *Lung Cancer* 85(2):337, 2014 August
- Suzuki, M., Toyooka, S., Shivapurkar, N., Shigematsu, H., Miyajima, K., Takahashi, T., Stastny, V., Zern, A.L., Fujisawa, T., Pass, H.I., Carbone, M., & Gazdar, A.F. “Aberrant methylation profile of human malignant mesotheliomas and its relationship to SV40 infection.” *Oncogene* 24(7):1302-8, 2005 Feb 10 (hereafter referred to as “*ONC* 2005”); Retraction in: *Oncogene* 33(21):2814, 2014 May 22
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- Suzuki, M., Shigematsu, H., Shivapurkar, N., Reddy, J., Miyajima, K., Takahashi, T., Gazdar, A.F., & Frenkel, E.P. “Methylation of apoptosis related genes in the pathogenesis and prognosis of prostate cancer.” *Cancer Lett.* 242(2):222-30, 2006 Oct 28 (hereafter referred to as “CL 2006”)
- Suzuki, M., Shigematsu, H., Shames, D.S., Sunaga, N., Takahashi, T., Shivapurkar, N., Iizasa, T., Minna, J.D., Fujisawa, T., & Gazdar, A.F. “Methylation and gene silencing of the Ras-related GTPase gene in lung and breast cancers.” *Ann Surg Oncol.* 14(4):1397-404, 2007 Apr (hereafter referred to as “ASO 2007”).
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Respondent falsified data representing glyceraldehyde 3-phosphate dehydrogenase (GAPDH) loading controls and methylated/unmethylated polymerase chain reaction (PCR) in reverse transcription-PCR (RT-PCR) gel panels.

Specifically, ORI found by a preponderance of the evidence that Respondent engaged in research misconduct by knowingly, intentionally, and recklessly falsely reporting the results of RT-PCR experiments by:

1. reusing and relabeling an image and claiming it represents different experiments of human tumor cell lines subjected to different treatments; specifically, an identical image was used

to represent the:

- (a) GAPDH RT-PCR panels in *BJC* 2005-01, Figure 1A, lanes 4-12, and Figure 1C, lanes 4-12
 - (b) GAPDH RT-PCR panels in *BJC* 2005-2, Figures 1A and 1B, and *ASO* 2007, Figures 1A and 1B
 - (c) unmethylated form of p16 (p16U) RT-PCR panel in *CL* 2006, Figure 1, lanes 3-10, positive (P) and negative (N) controls, and the p16 U RT-PCR panel in *ONC* 2005, Figure 2A.
2. manipulating an image and claiming it represents a gel with contiguous lanes; specifically, the RT-PCR products in the lanes of gels were cropped, spliced, and pasted together to form a single image for the:
- (a) GAPDH RT-PCR panels in *LC* 2005, Figures 1A and 1B
 - (b) methylated form of Decoy receptor 2 (DcR2 M) methylation-specific PCR (MSP) panel in *CL* 2006, Figure 1
 - (c) methylated form of small Ras-related GTPase (RRAD M) MSP panel in *ASO* 2007, Figure 3B.

Dr. Suzuki has entered into a Voluntary Settlement Agreement (Agreement) and has voluntarily agreed for a period of three (3) years, beginning on August 26, 2014:

- (1) to have his research supervised; Respondent agrees that prior to the submission of an application for U.S. Public Health Service (PHS) support for a research project on which the Respondent's participation is proposed and prior to Respondent's participation in any capacity on PHS-supported research, Respondent shall ensure that a plan for supervision of Respondent's duties is submitted to ORI for approval; the supervision plan must be designed to ensure the scientific integrity of Respondent's research; Respondent agrees that he shall not participate in any PHS-supported research until such a supervision plan is submitted to and approved by ORI; Respondent agrees to maintain responsibility for compliance with the agreed upon supervision plan;
- (2) that any institution employing him shall submit, in conjunction with each application for PHS funds, or report, manuscript, or abstract involving PHS-supported research in which Respondent is involved, a certification to ORI that the data provided by Respondent are based on actual experiments or are otherwise legitimately derived and that the data, procedures, and methodology are accurately reported in the application, report, manuscript, or abstract; and
- (3) to exclude himself voluntarily from serving in any advisory capacity to PHS including, but not limited to, service on any PHS advisory committee, board, and/or peer review committee, or as a consultant.

FOR FURTHER INFORMATION CONTACT:

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